Adult Bradycardia Administrative Guideline (Age ≥ 14)

History

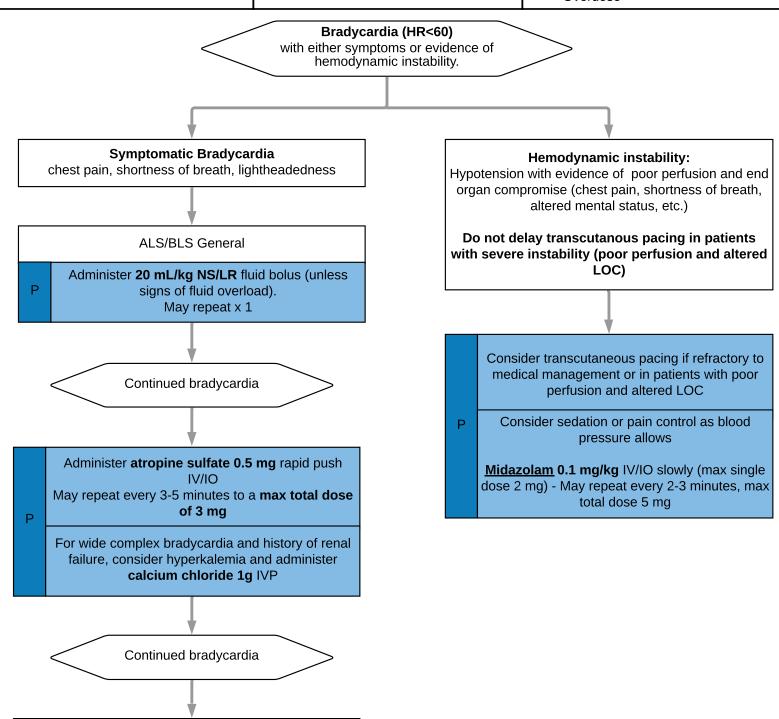
- · Past medical history
- Medications
 - Beta-Blockers
 - Calcium channel blockers
 - Clonidine
 - Digoxin
- Pacemaker

Signs and Symptoms

- · Chest pain
- · Respiratory distress
- Hypotension or Shock
- Altered mental status
- Syncope
- Lightheadedness/Dizziness

Differential

- Acute myocardial infarction
- Hypoxia / Hypothermia
- Pacemaker failure
- Sinus bradycardia
- · Head injury (elevated ICP) or Stroke
- Spinal cord lesion
- Sick sinus syndrome
- AV blocks (1°, 2°, or 3°)
- Overdose



Consider **Dopamine 2-10 mcg/kg/min** IVPB Titrate to HR >60 and SBP >90

Adult Bradycardia Administrative Guideline

Education/Pearls

Bradycardia

- Identifying signs and symptoms of poor perfusion caused by bradycardia is paramount.
- Rhythm should be interpreted in the context of symptoms and pharmacological treatment given ONLY when symptomatic; otherwise, closely monitor the patient and reassess.
- Do not delay transcutaneous pacing for patients with evidence of severe hemodynamically instability, with poor perfusion, or altered mental status.
- Bradycardia typically causes symptoms at a rate of <50 beats/minute.
 - Bradycardia may present with altered mental status, chest pain, congestive heart failure, seizure, syncope, shock, pallor, diaphoresis, or evidence of hemodynamic instability.
- · Consider treatable causes for bradycardia
 - Common causes: electrolyte abnormalities (e.g. hyperkalemia), myocardial ischemia, medication overdose (see below for more details), infections, hypoxemia, and hypothyroidism
 - Consider hyperkalemia in patients with ECG evidence of wide complex bradycardic rhythms. Administer calcium chloride 1 g IV/IO for suspicion of hyperkalemia.
 - Hypoxemia is a common cause of bradycardia. Ensure oxygenation and support respiratory efforts.

Atropine

- Do NOT delay Transcutaneous Pacing to administer Atropine in bradycardia with poor perfusion.
- Caution in setting of:
 - Acute MI, as elevated heart rate can worsen ischemia.
 - Overdoses, as administration may cause worsening bradycardia in certain scenarios (such as alpha agonist overdose, like Clonidine.)
 - Cardiac transplant, as it may cause paradoxical bradycardia.
- Transcutaneous Pacing Procedure (TCP)
 - Immediately utilize TCP in patients with evidence of poor perfusion or with high-degree AV block (2nd or 3rd degree) without IV/IO access.
 - If time allows, transport to a cardiac receiving center because transcutaneous pacing is a temporizing measure.
 - Consider sedation or pain control for TCP
 - Use EtCO₂ for all patients receiving sedation

Overdose

- Bradycardia is a consequence of medication overdoses, including beta blockers, calcium channels, and alpha-2 agonists (Clonidine)
- In Clonidine overdoses, avoid use of atropine in the setting of normotension, as atropine may cause reflex hypertension in this unique setting